

MATERIAL SAFETY DATA SHEET

MSDS # 1169 – COLD GOLD FIELD ADHESIVE

IMPORTANT: Read this Material Safety Data Sheet before handling or disposing of this product. This product safety information is provided to help our customers with health, safety and/or environmental matters. We have taken reasonable effort to ensure that the test methods and sources for this data are correct and reliable, however, we give no warranty, expressed or implied, regarding its correctness. Since conditions or methods of handling and using this product are beyond our control, we do not assume responsibility and expressly disclaim liability for damages resulting from or connected with the handling, storage, use or disposal of the product.

SECTION 1 PRODUCT AND MANUFACTURER'S INFORMATION

Manufacturer/Supplier's Name: IKO Industries Ltd.
Address: 71 Orenda Road
Brampton, Ontario
L6W 1V8
Emergency Phone: (905) 457-2880 - EXT. 3354
Product Name: Cold Gold Field Adhesive

SECTION 2 PREPARATION INFORMATION

Prepared/Reviewed By: HSE Department
Phone Number: (905) 457-2880 - EXT. 3354
Date: December 15, 2014

SECTION 3 HAZARDS IDENTIFICATION

Physical state: Solid.
Appearance: Black liquid.
Emergency overview: DANGER
May be harmful if inhaled. Causes skin, eye and respiratory tract irritation. May cause allergic skin reaction. May cause allergic respiratory reaction. Vapors may cause drowsiness and dizziness. High vapor concentrations may cause central nervous system effects. Prolonged or repeated skin contact may cause drying, cracking, or irritation.
OSHA regulatory status: This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

Potential health effects

Routes of exposure: Eye contact. Skin contact. Ingestion. Inhalation.
Eyes: Causes eye irritation.
Skin: Causes skin irritation. May cause sensitization by skin contact. Prolonged or repeated skin contact may cause drying, cracking, or irritation.
Inhalation: May cause allergic respiratory reaction. Causes respiratory tract irritation. Vapors may cause drowsiness and dizziness. High vapor concentrations may cause central nervous system effects.
Ingestion: May be harmful if swallowed.
Target organs: Eyes. Skin. Respiratory system Central nervous system.
Chronic effects: May cause allergic skin disorders in sensitive individuals. May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage.
Signs and symptoms: Sensitization. Wheezing. Difficulty in breathing. Irritation of eyes and mucous membranes. Symptoms may include redness, drying and

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cracking of the skin. Ingestion may cause irritation and malaise. May cause central nervous system effects. Vapors may cause drowsiness and dizziness.

Potential environmental effects: The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

SECTION 4 COMPOSITION / INFORMATION ON INGREDIENTS

Components	CAS #	Percent
Asphalt	8052-42-4	30-60
Diisocyanate methylenediphenyl	26447-40-5	3-7
Methylene diphenyl diisocyanate	101-68-8	3-7

Composition comments: All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

SECTION 5 FIRST AID MEASURES

First aid procedures

Eye contact: Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyelids wide apart. Get medical attention.

Skin contact: Remove contaminated clothing. Wash immediately with soap and water for at least 15 minutes. Get medical attention promptly if symptoms persist or occur after washing. Discard contaminated shoes and clothing.

Inhalation: Immediately remove from further exposure. Get immediate medical assistance. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. Give supplemental oxygen, if available. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

Ingestion: Get medical attention if any discomfort occurs.

Notes to physician: Provide general supportive measures and treat symptomatically.

General advice: Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

SECTION 6 FIRE FIGHTING MEASURES

Flammable properties: The product is not flammable. However: Will burn if strongly heated and when involved in fire.

Extinguishing media

Suitable extinguishing media: Dry chemical powder. Carbon dioxide (CO₂). Foam.

Unsuitable extinguishing media: No restrictions known.

Protection of firefighters

Specific hazards arising from the chemical: Reacts with water and emits carbon dioxide gas.

Protective equipment and: Self-contained breathing apparatus, operated in positive pressure mode
Precautions for firefighters and full protective clothing must be worn in case of fire.

Firefighting equipment/instructions: Move containers from fire area if you can do so without risk.

Hazardous combustion products: Carbon oxides. Nitrogen oxides. Isocyanates. Cyanide compounds. Hydrocyanic acid. Sulfur oxides. Hydrogen sulfide.

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SECTION 7 ACCIDENTIAL RELEASE MEASURES

- Personal precautions: Avoid inhalation of vapors and contact with skin and eyes. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection, see Section 9 of the MSDS.
- Environmental precautions: Prevent entry into waterways, sewer, basements or confined areas. Environmental manager must be informed of all major spillages.
- Methods for containment: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Collect and dispose of spillage as indicated in Section 14 of the MSDS.
- Methods for cleaning up: Wipe up with absorbent material (e.g. cloth, fleece). Prevent product from entering drains. Never return spills in original containers for re-use. Should not be released into the environment.
- Other information: Clean up in accordance with all applicable regulations.

SECTION 8 HANDLING AND STORAGE

- Handling: Wear personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices. Avoid inhalation of vapors and contact with skin and eyes.
- Storage: Store in tightly closed original container. Store in a cool and well-ventilated place. Store away from incompatible materials. Reacts with water and emits carbon dioxide gas.

SECTION 9 EXPOSURE CONTROLS / PERSONNEL PROTECTION

Occupational exposure limits
US. ACHIH Threshold limit values

Components	Type	Value	Form
Asphalt (CAS 8052-42-4)	TWA	0.5 mg/m ³	Inhalable fraction.
Methylene diphenyl diisocyanate (CAS101-68-8)	TWA	0.005 ppm	

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Methylene diphenyl diisocyanate (CAS101-68-8)	Ceiling	0.2 mg/m ³
		0.02 ppm

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value	Form
Asphalt (CAS 8052-42-4)	TWA	5 mg/m ³	Fume.
Methylene diphenyl diisocyanate (CAS 101-68-8)	TWA	0.05 mg/m ³	
		0.005 ppm	

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
Asphalt (CAS 8052-42-4)	TWA	0.5 mg/m ³	Aerosol,
inhalable.			
Methylene diphenyl diisocyanate (CAS 101-68-8)	Ceiling	0.01 ppm	

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TWA 0.005 ppm

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
Asphalt (CAS 8052-42-4)	TWA	0.5 mg/m3	Inhalable fraction.
Methylene diphenyl diisocyanate (CAS 101-68-8)	Ceiling	0.02 ppm	
	TWA	0.005 ppm	

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value	Form
Asphalt (CAS 8052-42-4)	TWA	5 mg/m3	Fume.
Methylene diphenyl diisocyanate (CAS 101-68-8)	TWA	0.051 mg/m3	
		0.005 ppm	

Mexico. Occupational Exposure Limit Values

Components	Type	Value	Form
Asphalt (CAS 8052-42-4)	STEL	10 mg/m3	Fume.
	TWA	5 mg/m3	Fume.
Methylene diphenyl diisocyanate (CAS 101-68-8)		0.005 ppm	

Exposure guidelines: No exposure standards allocated.

Canada - British Columbia OELs: Skin designation
Methylene diphenyl diisocyanate: Can be absorbed through the skin.
(CAS 101-68-8)

Engineering controls: General ventilation normally adequate. Ensure adequate ventilation, especially in confined areas.
Provide easy access to water supply and eye wash facilities.

Personal protective equipment

Eye / face protection: Wear approved chemical safety goggles. Use face shield in case of splash risk.

Skin protection: Wear chemical-resistant gloves, footwear and protective clothing appropriate for risk of exposure. Contact chemical protective clothing manufacturer for specific information.

Respiratory protection: In case of inadequate ventilation, use respiratory protection.

General hygiene considerations: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking.
Routinely wash work clothing and protective equipment to remove contaminants.

SECTION 10 PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Black liquid.
Physical state: Solid.
Form: Liquid.
Color: Black.
Odor: Faint petroleum.
Odor threshold: Not available.
ph: Not available.

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Vapor pressure: Not available.
Vapor density: Not available.
Boiling point: Not available.
Melting point/Freezing point: Not available.
Solubility (water): Not available.
Specific gravity: 1.01
Flash point: 300.2 °F (149.0 °C) Pensky-Martens Closed Cup
Flammability limits in air, upper, % by volume: Not available.
Flammability limits in air, lower, % by volume: Not available.
Auto-ignition temperature: Not available.
Viscosity: 125000 - 250000 cP

SECTION 11 CHEMICAL STABILITY AND REACTIVITY INFORMATION

Chemical stability: The product is stable under normal conditions of use, storage and transport.
Conditions to avoid: Exposure to heat and contact with sources of ignition. Contact with incompatible materials.
Incompatible materials: Strong oxidizing agents. Water. Strong acids. Strong bases. Alcohols. Metals.
Hazardous decomposition: No hazardous decomposition products are known.
products
Possibility of hazardous reactions: Reacts with water and emits carbon dioxide gas.

SECTION 12 TOXICOLOGICAL INFORMATION

Toxicological data

Components	Species	Test Results
Asphalt (CAS 8052-42-4)		
Acute		
Dermal		
LD50	Rabbit	>= 2000 mg/kg
Oral		
LD50	Rat	>= 5000 mg/kg

Methylene diphenyl diisocyanate (CAS 101-68-8)

Acute		
Inhalation		
LC50	Rat	> 2.24 mg/l, 1 Hours

Sensitization	May cause allergic respiratory and skin reactions.
Acute effects	May be harmful if inhaled.
Local effects	Causes skin, eye and respiratory tract irritation. Exposed individuals may experience eye tearing, redness, and discomfort. Repeated exposure may cause skin dryness or cracking.
Chronic effects	May cause allergic respiratory and skin reactions. May cause central nervous system effects.

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Carcinogenicity	Not classified.
ACGIH Carcinogens	
Asphalt (CAS 8052-42-4)	A4 Not classifiable as a human carcinogen.
IARC Monographs. Overall Evaluation of Carcinogenicity	
Asphalt (CAS 8052-42-4)	2B Possibly carcinogenic to humans. 3 Not classifiable as to carcinogenicity to humans.
Methylene diphenyl diisocyanate (CAS 101-68-8)	3 Not classifiable as to carcinogenicity to humans.
Epidemiology	Not available.
Mutagenicity	Not classified.
Neurological effects	Not available.
Reproductive effects	Not classified.
Teratogenicity	Not available.
Symptoms and target organs	Irritation of eyes and mucous membranes. Skin irritation. Sensitization. Wheezing. Difficulty in breathing. Ingestion may cause irritation and malaise. Vapors may cause drowsiness and dizziness. High vapor concentrations may cause central nervous system effects. Prolonged or repeated skin contact may cause drying, cracking, or irritation.

WARNING: This product may contain oxidized bitumens. The International Agency for Research on Cancer (the “IARC”) published a monograph in 2013 which concluded that “occupational exposure to oxidized bitumens and their emissions during roofing operations are probably carcinogenic to humans.” The IARC found that there is “limited evidence” in humans for the carcinogenicity of occupational exposures to bitumens and bitumen emissions during roofing and mastic-asphalt work. The IARC also found that there is “sufficient evidence” in experimental animals for carcinogenicity of fume condensates generated from oxidized bitumen. All other evidence of cancer in humans and experimental animals was judged “inadequate” or “limited.” The physical nature of this product may help limit any inhalation hazard from oxidized asphalt during application in its hardened state. However, physical forces such as grinding, drilling and other demolition work on this product may liberate dust containing oxidized asphalt. Burning or heating of the product may cause fumes, vapors or mists.

SECTION 13 ECOLOGICAL INFORMATION

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Environmental effects	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Persistence and degradability	Expected to be persistent.
Bioaccumulation / Accumulation	The product is not expected to bioaccumulate.
Mobility in environmental media	Water reactive material.

SECTION 14 DISPOSAL CONSIDERATIONS

Waste codes	Waste codes should be assigned by the user based on the application for which the product was used.
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Disposal instructions	Dispose in accordance with all applicable regulations. Do not allow runoff to sewer, waterway or ground.
Waste from residues / unused products	Dispose of in accordance with local regulations.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied.

SECTION 15 TRANSPORTATION INFORMATION

DOT	Not regulated as a hazardous material by DOT.
IATA	Not regulated as dangerous goods.
IMDG	Not regulated as dangerous goods.
TDG	Not regulated as dangerous goods.
General	The transportation information provided represents the regulatory transport classification of the product without consideration to packaging, quantity, or modal restrictions and exceptions. It is the user's responsibility to determine the appropriate packaging and modal requirements and/or limitations for the product quantity being shipped.

SECTION 16 REGULATORY INFORMATION

US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)	Not regulated.
Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List	Methylene diphenyl diisocyanate (CAS 101-68-8)
US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration	Methylene diphenyl diisocyanate (CAS 101-68-8) 1.0 %
US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance	Methylene diphenyl diisocyanate (CAS 101-68-8) Listed.
CERCLA (Superfund) reportable quantity (lbs) (40 CFR 302.4)	Methylene diphenyl diisocyanate: 5000
Superfund Amendments and Reauthorization Act of 1986 (SARA)	
Hazard categories	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
Section 302 extremely hazardous substance (40 CFR 355, Appendix A)	No
SARA 311/312 Hazardous chemical	Yes
Drug Enforcement Administration (DEA) (21 CFR 1308.11-15)	Not controlled
Canadian regulations	This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.
WHMIS status	Controlled
WHMIS classification	D2A - Other Toxic Effects-VERY TOXIC

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D2B - Other Toxic Effects-TOXIC

WHIMUS labeling



Inventory status

Country(s) or region	Inventory name	On inventory	(yes/no)*
Canada	Domestic Substances List (DSL)		Yes
Canada	Non-Domestic Substances List (NDSL)		No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory		Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

State regulations WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

US - California Hazardous Substances (Director's): Listed substance

Asphalt (CAS 8052-42-4)	Listed.
Methylene diphenyl diisocyanate (CAS 101-68-8)	Listed.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

1,3-butadiene (CAS 106-99-0)	Listed.
4-Vinylcyclohexene (CAS 100-40-3)	Listed.
Asphalt (CAS 8052-42-4)	Listed.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

1,3-butadiene (CAS 106-99-0)	Listed: April 1, 1988 Carcinogenic.
4-Vinylcyclohexene (CAS 100-40-3)	Listed: May 1, 1996 Carcinogenic.
Asphalt (CAS 8052-42-4)	Listed: January 1, 1990 Carcinogenic.

US - California Proposition 65 - CRT: Listed date/Developmental toxin

1,3-butadiene (CAS 106-99-0)	Listed: April 16, 2004 Developmental toxin.
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US - California Proposition 65 - CRT: Listed date/Female reproductive toxin

1,3-butadiene (CAS 106-99-0)	Listed: April 16, 2004 Female reproductive toxin.
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4-Vinylcyclohexene (CAS 100-40-3)	Listed: August 7, 2009 Female reproductive toxin.
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US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

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1,3-butadiene (CAS 106-99-0)
4-Vinylcyclohexene (CAS 100-40-3)

Listed: April 16, 2004 Male reproductive toxin.
Listed: August 7, 2009 Male reproductive toxin.

US - New Jersey RTK - Substances: Listed substance

Asphalt (CAS 8052-42-4) Listed.
Methylene diphenyl diisocyanate (CAS 101-68-8) Listed.

US - Pennsylvania RTK - Hazardous Substances: Special hazard

Asphalt (CAS 8052-42-4) Special hazard.

US. Massachusetts RTK - Substance List

Asphalt (CAS 8052-42-4) Listed.
Methylene diphenyl diisocyanate (CAS 101-68-8) Listed.

US. New Jersey Worker and Community Right-to-Know Act

Methylene diphenyl diisocyanate (CAS 101-68-8) 500 lbs.

US. Pennsylvania RTK - Hazardous Substances

Asphalt (CAS 8052-42-4) Listed.
Methylene diphenyl diisocyanate (CAS 101-68-8) Listed.

SECTION 17 OTHER INFORMATION

Further information HMIS® is a registered trade and service mark of the NPCA.

I - Safety Glasses, Gloves, Dust, Vapor Respirator

HMIS® ratings

Health: 3*

Flammability: 1

Physical hazard: 1

NFPA Rating

